



Heritage Citation



Mount Crosby Waterworks Buildings

Key details

Addresses	At 441 Blackwall Road, Chuwar, Queensland 4306
Type of place	Waterworks
Period	Federation 1890-1914
Style	Functionalist
Lot plan	L4_RP25243
Key dates	Local Heritage Place Since — 20 February 2004 Date of Citation — September 2002
Criterion for listing	(A) Historical; (B) Rarity; (E) Aesthetic; (F) Technical; (G) Social; (H) Historical association

The Mount Crosby Waterworks features one of Australia's earliest major water pumping stations. It has been in the same place, carrying out the same function for over a century and substantial elements of the original fabric are still in use. The buildings and processes encapsulate the many developments that have occurred in the technology of public water supply over the last hundred years. The robustness and general high quality of the buildings embody the civic pride invested in this important facility. The grouping and tenor of the buildings make an important contribution to the visual character of Mount Crosby. The Works are the reason for settlement at Mount Crosby and have been at the heart of this community for over one hundred years.

The Mount Crosby Waterworks is, according to Professor Ray Whitmore, "a massive social and engineering undertaking" (1992, p.1). The facilities under consideration in this report are spread across some 50 square kilometres of the Brisbane River Catchment area. The Waterworks comprise major infrastructure such as the Lake Manchester Dam and Low Level Treatment Plant, as well as small structures such as the timber cottages built for Waterworks employees and their families. Given the scale of the Waterworks and the limited time available to prepare this overview, it was not possible to document each significant feature of the various sites that comprise the Waterworks. Many of the items are overgrown and/or not readily accessible. Therefore, for detailed descriptions and heritage assessments of the Waterworks' components refer to the 1992 Study.

The Study includes a detailed and separate Appendix on the employees' accommodation.

History

In the 1880s, Brisbane suffered a series of droughts, prompting the city administration to investigate ways of improving the reliability of the city's water supply. At the time supply was gravity fed from two dams at Enoggera and Gold Creek. The Brisbane Board of Waterworks instructed its chief engineer to prepare plans for overcoming the problem and in 1889 legislation was enacted allowing the city to draw water from the upper

reaches of the Brisbane River at Mount Crosby. In 1890 works commenced on a pumping station on the east bank of the River. Water was pumped to a high-level reservoir on Mt Crosby and then gravity fed through 30km of pipeline to Brisbane. With the exception of the reservoir caretaker (who occupied a cottage adjacent to the reservoir) the staff of thirteen operating the works was housed in small groups of homes adjacent to the Pumping Station.

In 1910 the Board's responsibilities were transferred to the Metropolitan Water and Sewerage Board. In 1912 work commenced on a concrete dam across Cabbage Tree Creek, in accordance with the suggestions of an American expert, Allen Hazen, who was invited to the Waterworks as an advisor in 1906. Following years of problems with water hardness, turbidity and high bacterial content, the first water treatment plant was built in 1913. This comprised facilities immediately below the high-level reservoir and slow sand filters installed a kilometre away on Holts Hill.

At the same time a tramway was constructed from the Tivoli Branch railway line to the Pumping Station, in order to transport coal for the Station boilers and building materials to the site.

In 1922, following an agreement with the Ipswich City Council, pipelines were laid from Mount Crosby to that city. The capacity of the Pumping Station was upgraded between 1925 and 1927 and water intake was improved by constructing a new intake immediately upstream of a new bridge and concrete weir. Responsibility for the Waterworks was transferred in 1928 from the Metropolitan Water and Sewerage Board to the Brisbane City Council Department of Water Supply and Sewerage. The size and complexity of the water treatment plant continued to grow and in 1936 the large slow sand filters in Holt's Hill were replaced.

Following World War 2 the Pumping Station was electrified and a sub-station built next to the engine house to handle incoming supply. In the 1950s attention was focused on expanding and updating the water treatment facilities, particularly the low-level works. By 1963 these facilities superseded the Holt's Hill filters, which were converted to reservoirs for treated water. The 1960s, 1970s, and 1980s were notable for the continuing rise in demand for water and facilities were expanded accordingly. The Waterworks celebrated its centenary on 2nd April 1992. Mount Crosby has the capacity to continue to supply South-East Queensland with a safe reliable supply of drinking water into the distant future.

The opening up of adjacent land to residential development has dispelled the sense of isolation that was for so long the feature of working at the Waterworks. It has also removed the need for staff to be provided with on-site living accommodation. Consequently, the clusters of workers' houses that were built mainly around the Pumping Station (c.1890) and along Mount Crosby Road (c.1890s, 1920s, 1940s), were no longer needed. In March 1997 seventeen cottages and thirty-one blocks of land were auctioned. In 1999 five additional cottages were offered on the land on which they stood, along with twenty blocks of land and some cottages for removal to these vacant blocks (*Nissen, p. 181*).

Description

The purpose of the Mount Crosby Waterworks is to provide Brisbane's drinking water. The Works extract water from the Brisbane River's upper reaches, pump it to the treatment plant, store the purified water in reservoirs and gravity feed the water to the various reservoirs in the city.

The Lake Manchester Dam is built on Cabbage Tree Creek, a tributary which joins the Brisbane River upstream from the Works. It was constructed in 1912 in order to provide a more reliable water supply to the Works but proved unsuccessful in this role. The subsequent construction of the Somerset (1951) and Wivenhoe Dams (1986) successfully augmented the flow of water to the Works.

The pumping, treatment and storage works are concentrated on and around Mt Crosby and nearby hills. The areas of the Works identified below, Places 1-10, are those used by the 1992 Heritage Study.

Note on the condition of the structures

The assessment of the condition of the dozens of structures that comprise the Waterworks is not within the scope of this report. However brief notes on the state of repair of some of the items identified by Whitmore as of Exceptional and High Significance are included in discussions below on the various Places. Note these comments are based on brief visual inspections. No assessment was made of major structures such as reservoirs.

Place 1: The Brisbane River

This is the area of the Brisbane River adjacent to the Pumping Station. Here, the water is dammed by a low-level weir, extracted via concrete intake structures and conveyed to the Pumping Station. A large terraced stone retaining wall was built in 1979 to stabilise the embankment between the River and the Pumping Station.

Condition

The condition of these structures was not assessed as part of this report.

Place 3: The Pipeline Corridors

The 1992 Study is primarily concerned with the “major” pipelines, “particularly those of which there is still clear visual evidence” (p.38). Some are still functioning, others not. The Study assesses not only the different types (cast iron, lockbar, welded steel) of remaining pipework used to reticulate water in its various stages of treatment, but also the remains of the Brisbane and Ipswich Booster Stations.

Condition

These were not inspected for this report.

Place 5: Employees’ Housing

More than fifty dwellings had been built for Waterworks employees between c. 1890 and the 1950s. Of these, only seven buildings remain in Council ownership. These are three detached houses and four duplexes on Stumers Road, between Mount Crosby Road and the Pumping Station. The houses are identified as Cottages 102, 111 and 112 and the duplexes as Cottages 103/104, 105/106, 107/108, 109/110 in the 1992 Heritage study. These are all timber houses built in the 1890s.

Condition

These houses are rented out to private tenants. Some appear to be in a poor state of repair.

Place 7: Holt’s and Cameron’s Hills

Cameron’s Hill is connected to Holt’s Hill by a narrow neck, and since 1969 has been used for the storage of purified water. Holt’s Hill was the location chosen for the first water filtration plant and purified water storage at Mount Crosby. It has two kinds of filters – slow sand (built in 1928 and 1924) and rapid (built in 1936). The latter were constructed inside one of the slow sand filters, retaining most of the original structure. Minor changes were made to the remaining slow sand filters when they were converted to water storages in 1963. The 1924 units have been taken out of service, filled and allowed to revegetate.

Condition

Of all the Waterworks facilities, those at Holt's and Cameron's Hills are probably the most isolated. The brick, dutch gabled ancillary structures at Holts Hill – the Rapid Filter House, The Office & Store Building and the Regulator House House No.1 - are in a state of disrepair. Roof sheeting is rusted and boarded over windows indicate susceptibility to vandalism. The manager reports that the Regulator House No. 1 is "termite ridden".

The structures at Cameron's Hill were not inspected for this report.

Place 8: The Mount Crosby Tramway and Aerial Ropeway

The tramway was actually a railway, which used to carry coal from Ipswich to the Pumping Station's Boiler house. The tramway was superseded by road transport in 1945 and the line was closed two years later. Remnants include embankments and cuttings between Mount Crosby and Tivoli, tramway rails embedded in the weir overbridge, a weighbridge and cabin, a winch-house slab and trackbed to ropeway loading station.

The aerial ropeway was built to transport building materials and equipment to the otherwise inaccessible sites of the Low-level treatment plant and Holt's Hill. A spur line of the tramway was built to haul goods to the aerial ropeway loading station on the west bank of the Brisbane River, a short distance downstream from the weir. From there the ropeway crossed the River, climbing a steep hillside to the Low-level works, where an intermediate station was constructed. The ropeway then crossed Cameron's Creek to a terminal station at Holt's Hill.

Remnants of the ropeway identified by the 1992 Study include an overgrown levelled area where the loading station was, five steel trestles that once supported the ropeway (now converted to carry power cables), a large coil of steel rope, a graded track from the loading station down to the gravel beds in the Brisbane River and two large rivetted steel buckets used to carry goods on the ropeway.

Condition

These were not inspected for this report.

Place 9: Lake Manchester

Lake Manchester was formed when a dam was constructed across Cabbage Tree Creek, a tributary that joins the Brisbane River upstream from the Waterworks. The dam was first proposed in 1907 and completed in 1916. The dam is described as a Cyclopean concrete dam, 220m long (including spillway) and 35m high, thinning from 28.5m at the base to 3m at the top. The valve house is situated in the centre of the dam and controls three valves near the base of the dam. A timber suspension Bridge spans the spillway, from the end of the dam wall to the rock wall of Cabbage Tree Creek. The bridge is closed to the public.

Other structures of note are the weatherboard hut that is the Ipswich Booster House, remnants of the quarry that was the source of the stone used in the dam wall, a pipeline to the Brisbane River, and pumping station remains near the confluence of the River and Cabbage Tree Creek.

Condition

The structures at Lake Manchester were not inspected for this report. However the manager reports that the suspension bridge has been condemned for 12 years. It is ready to be dismantled.

Place 10: The West Bank Treatment Works.

This treatment plant is located on flat land a short distance upstream from the weir. Construction commenced in 1980 and the facility was not included in the 1992 Heritage Study, except for the restored 1922 Kent Flow Meter on display in the entrance lobby.

Statement of significance

Relevant assessment criteria

This is a place of local heritage significance and meets one or more of the local heritage criteria under the Heritage planning scheme policy of the *Brisbane City Plan 2014*. It is significant because:

Historical

CRITERION A

The place is important in demonstrating the evolution or pattern of the city's or local area's history

as one of the earliest major water pumping stations in Australia and as a complete storage, pumping and treatment facility that has adapted to growing demands and changing technologies.

Rarity

CRITERION B

The place demonstrates rare, uncommon or endangered aspects of the city's or local area's cultural heritage

as Brisbane's only water pumping and treatment plant.

Aesthetic

CRITERION E

The place is important because of its aesthetic significance

as a collection of imposing and visually striking structures set against the serene backdrop of Mount Crosby village and the surrounding bush.

Technical

CRITERION F

The place is important in demonstrating a high degree of creative or technological achievement at a particular period

as a continuously functioning and regularly upgraded water storage, pumping and treatment facility, which

encapsulates many developments that have occurred in the technology of public water supply.

Social

CRITERION G

The place has a strong or special association with the life or work of a particular community or cultural group for social, cultural or spiritual reasons

as the reason for settlement at Mount Crosby and the focus of employment and activity in the area for over one hundred years.

Historical association

CRITERION H

The place has a special association with the life or work of a particular person, group or organization of importance in the city's or local area's history

as an example of early major water supply infrastructure commissioned by the Brisbane Board of Waterworks and maintained and expanded for over one hundred years.

References

1. Nissen, p. 181
2. Brisbane City Council - City Assets Branch *Conservation Management Study* Stage 1 Report. November 2002

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Note: This citation has been prepared on the basis of evidence available at the time including an external examination of the building. The statement of significance is a summary of the most culturally important aspects of the property based on the available evidence, and may be re-assessed if further information becomes available. The purpose of this citation is to provide an informed evaluation for heritage registration and information. This does not negate the necessity for a thorough conservation study by a qualified practitioner, before any action is taken which may affect its heritage significance.

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